

FIG. 1
(PRIOR ART)

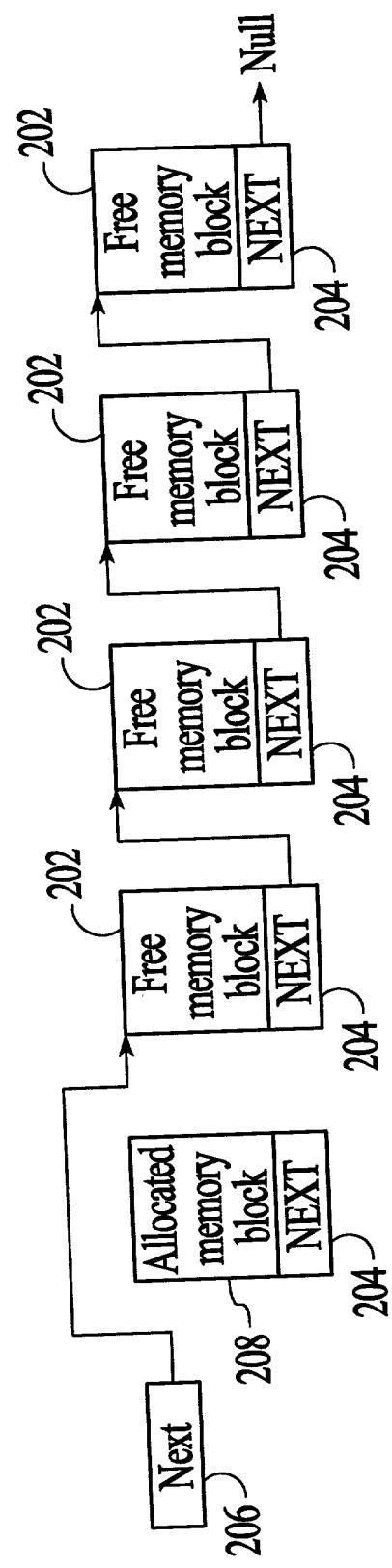


FIG. 2
(PRIOR ART)

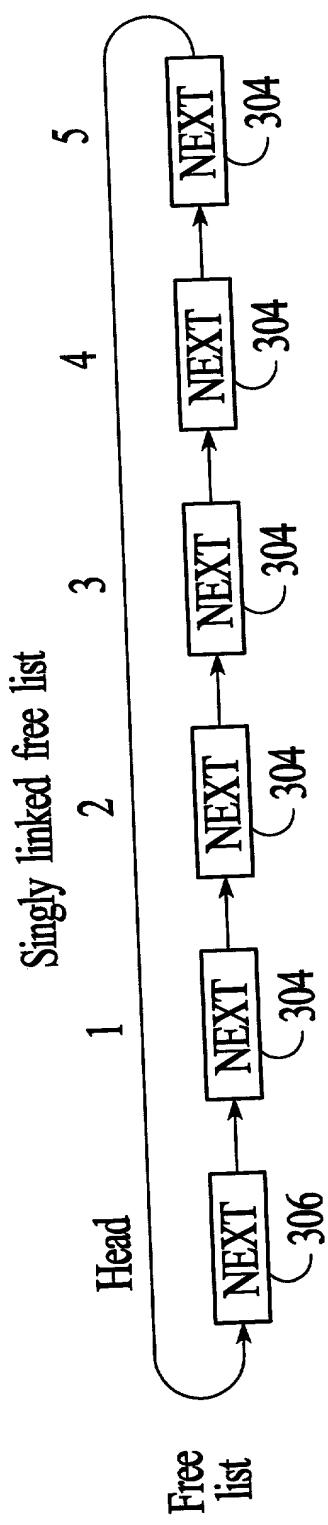


FIG. 3 (PRIOR ART)

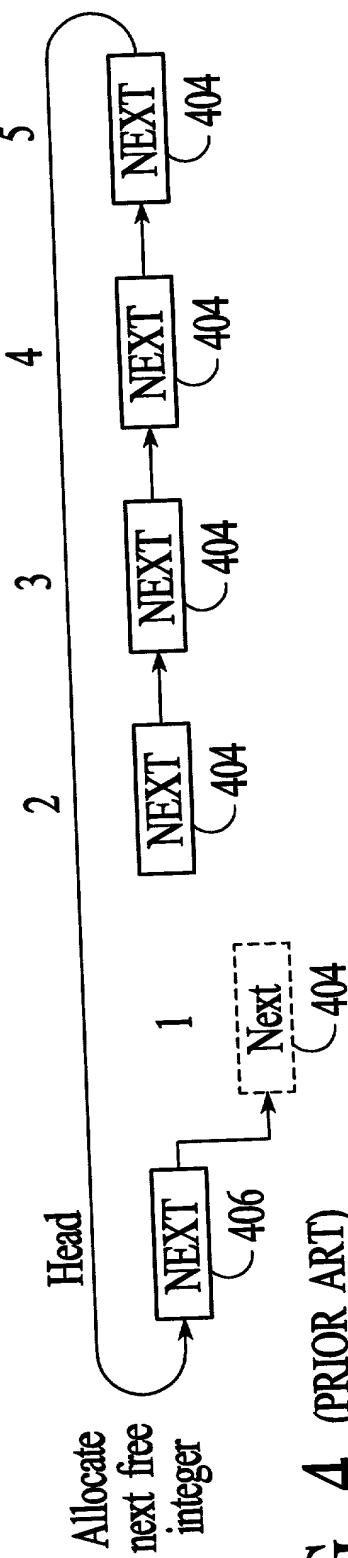


FIG. 4 (PRIOR ART)

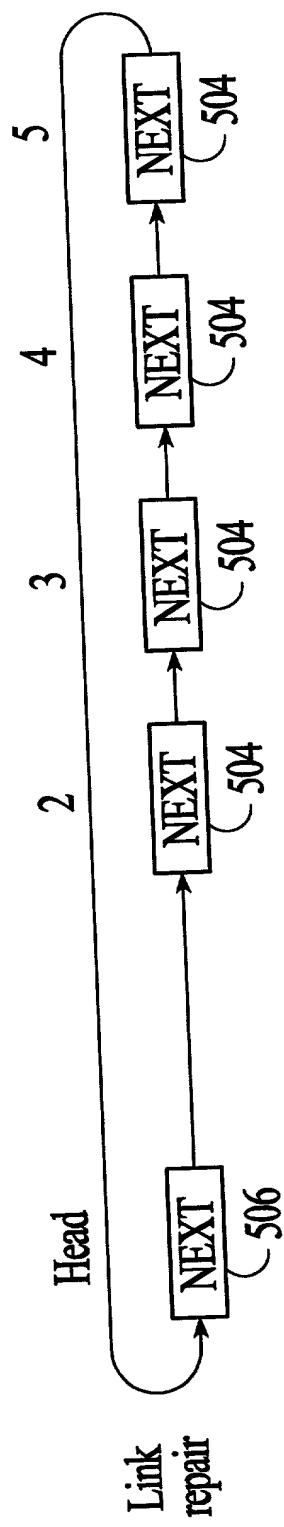


FIG. 5 (PRIOR ART)

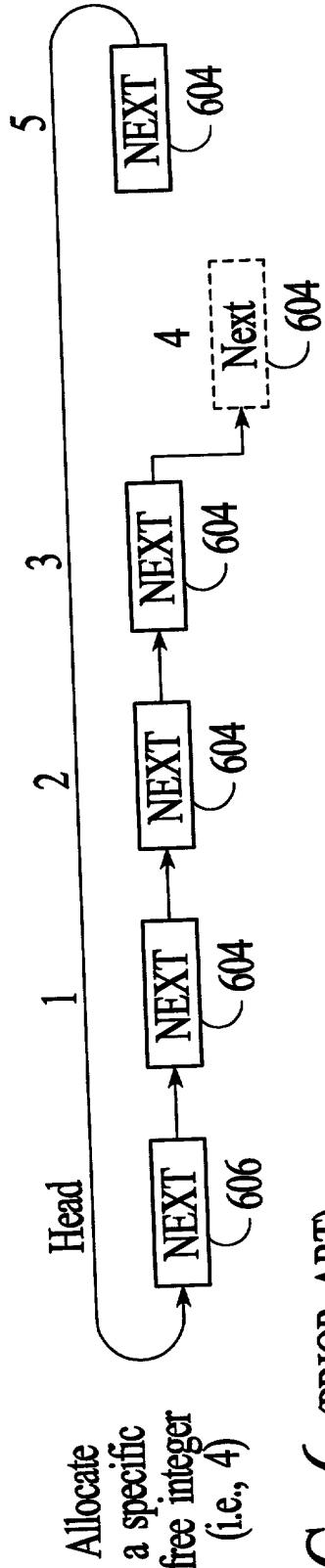


FIG. 6 (PRIOR ART)

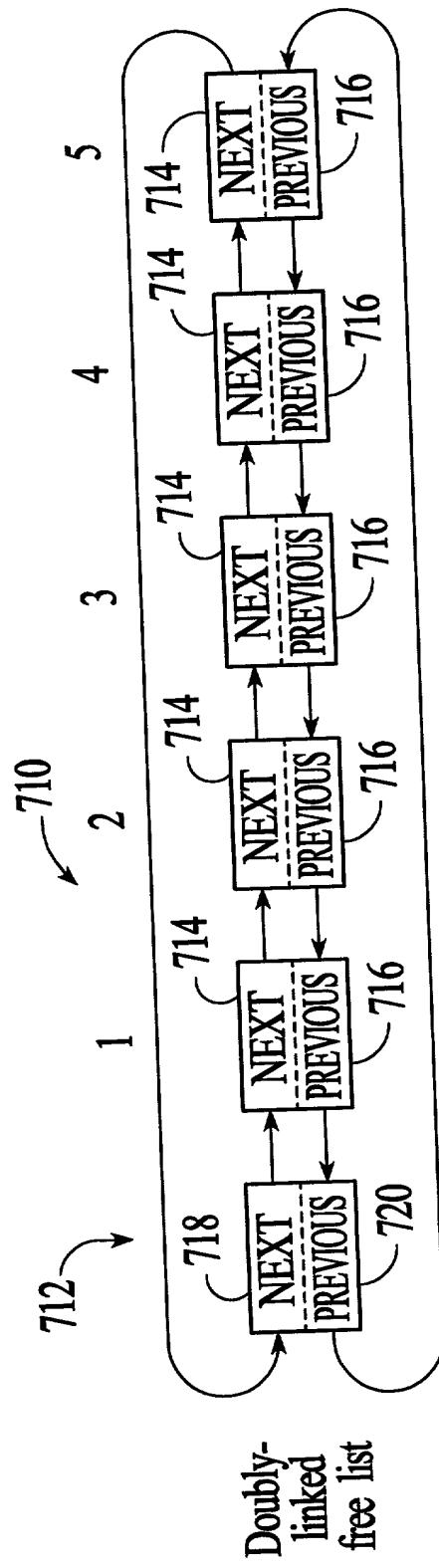


FIG. 7

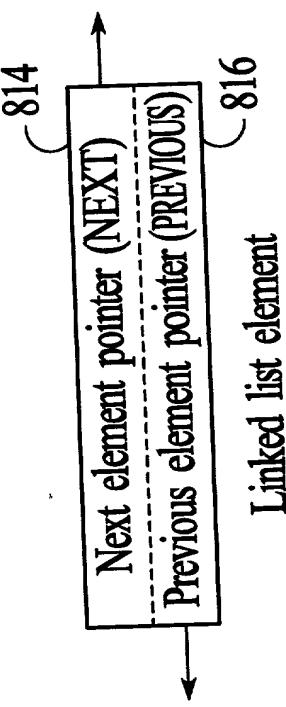


FIG. 8

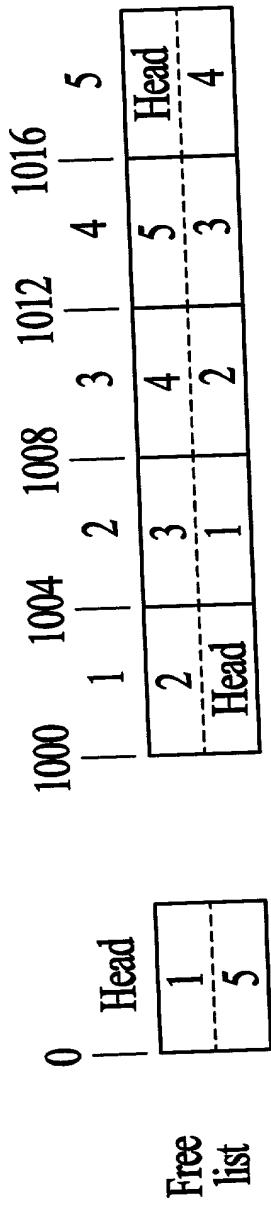


FIG. 9A

Request: Allocate a specific free number (i.e., 4)

Use previous pointer to identify previous element and then adjust next pointer of the previous element

4

Use next pointer to identify next element and then adjust previous pointer of the next element

FIG. 9B

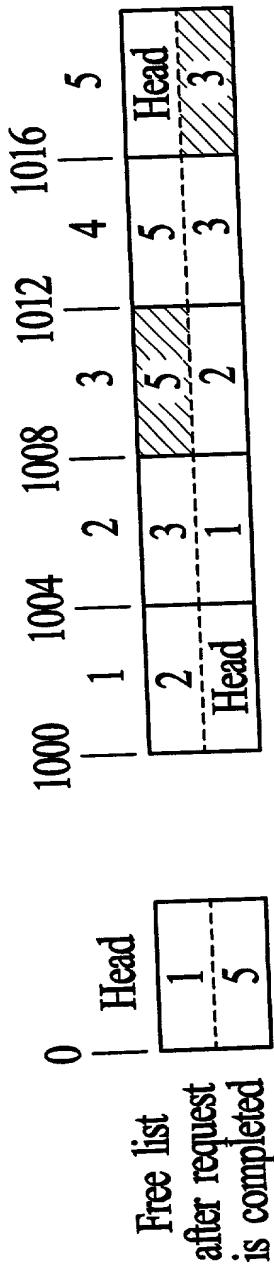


FIG. 9B

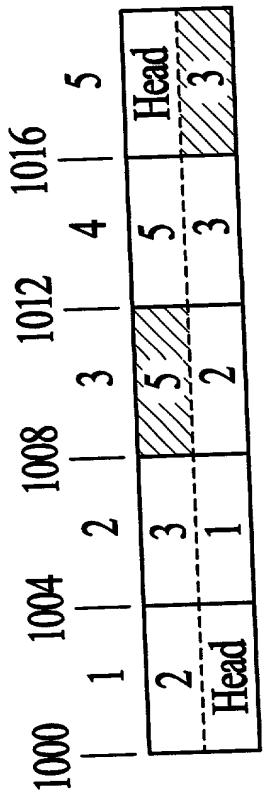


FIG. 9C

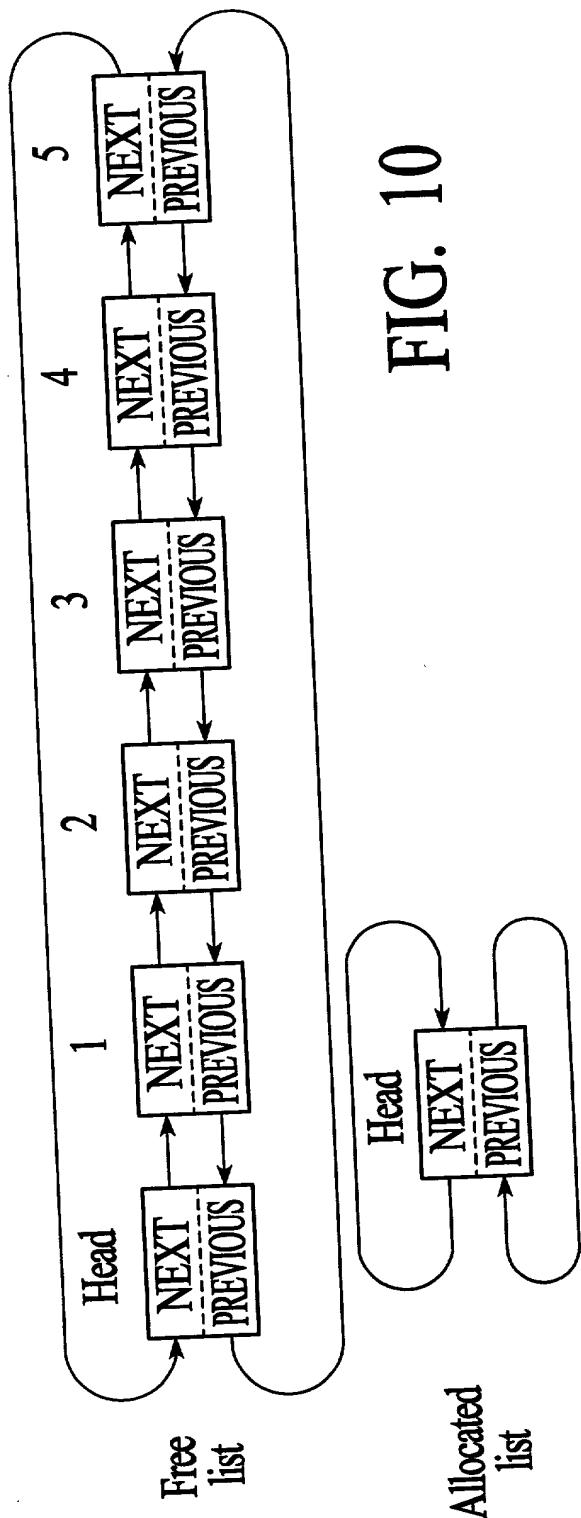


FIG. 10

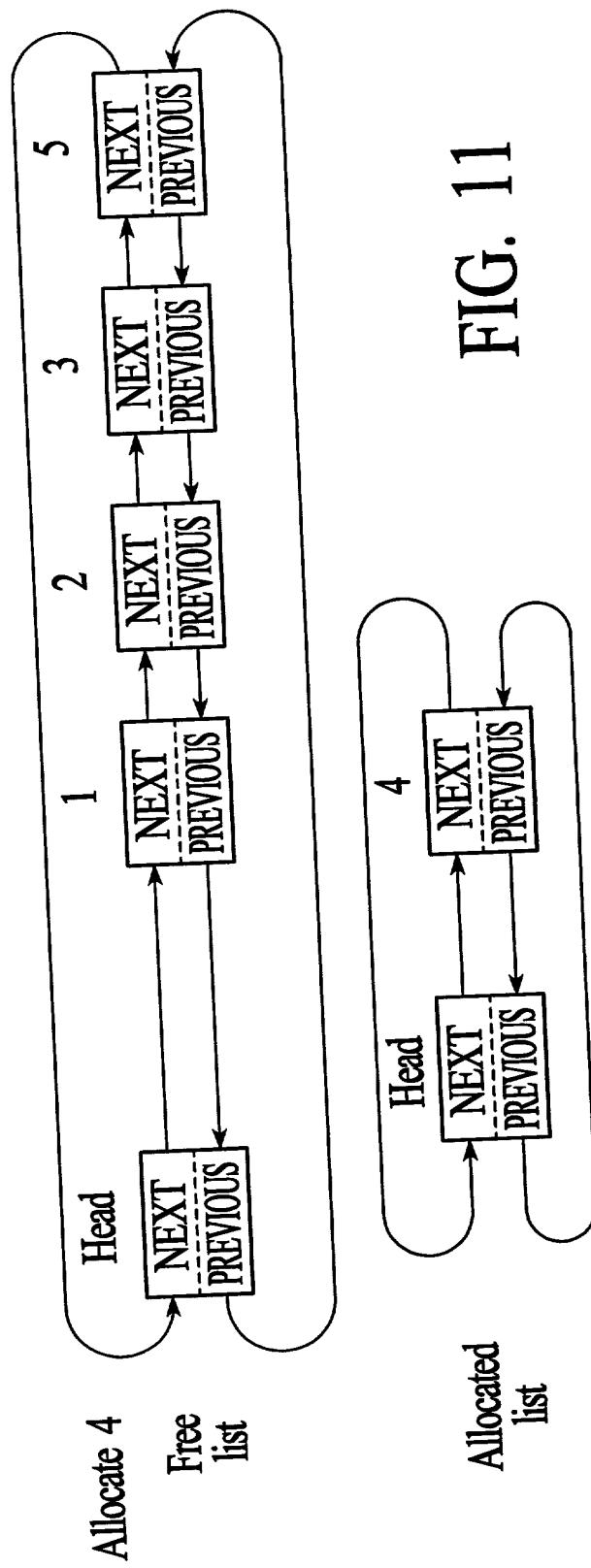


FIG. 11

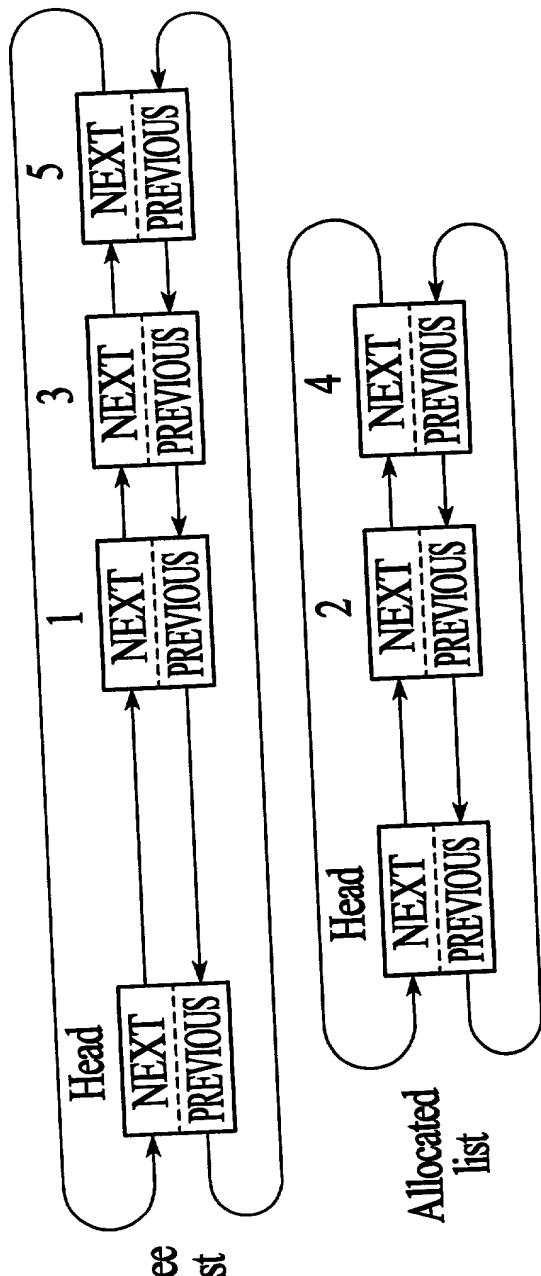


FIG. 12

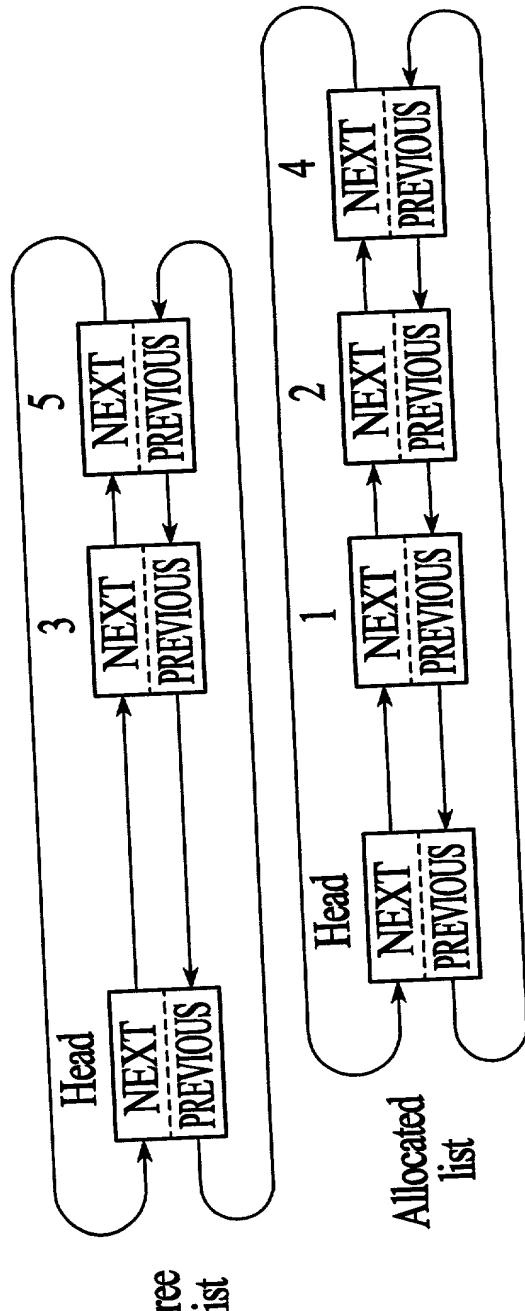
Allocate next
free number (1)
Free list

FIG. 13

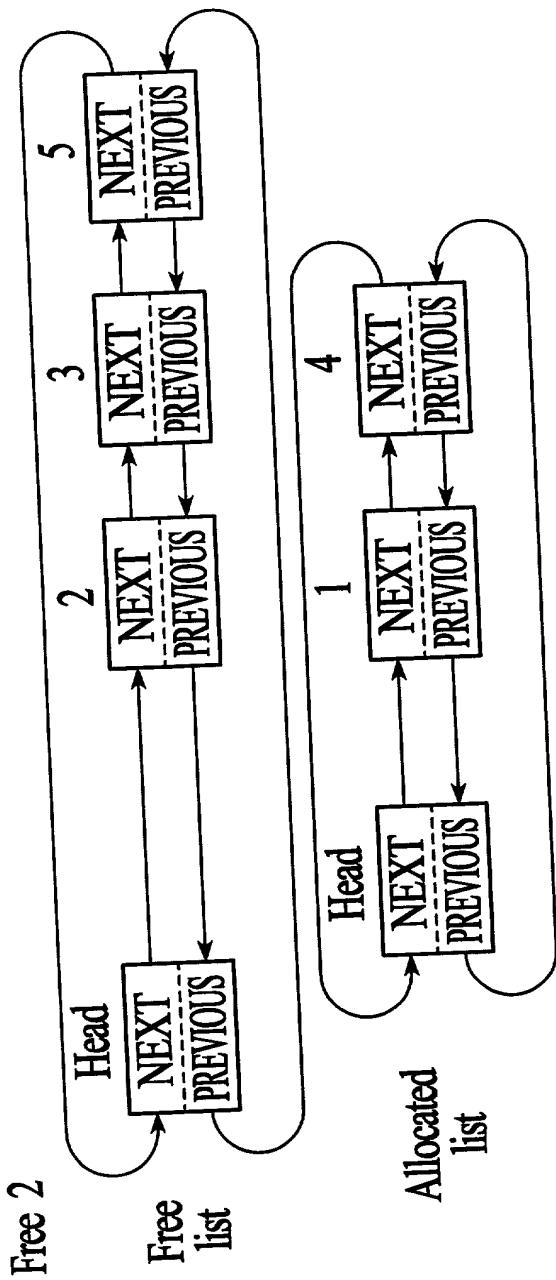


FIG. 14

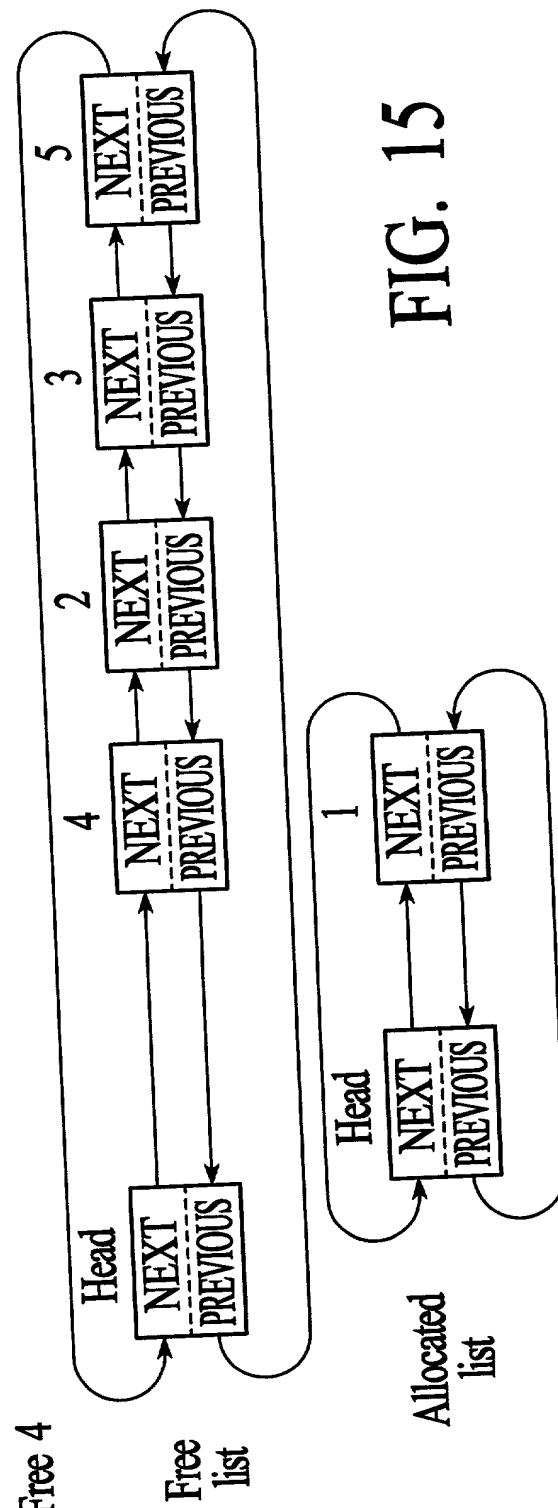


FIG. 15

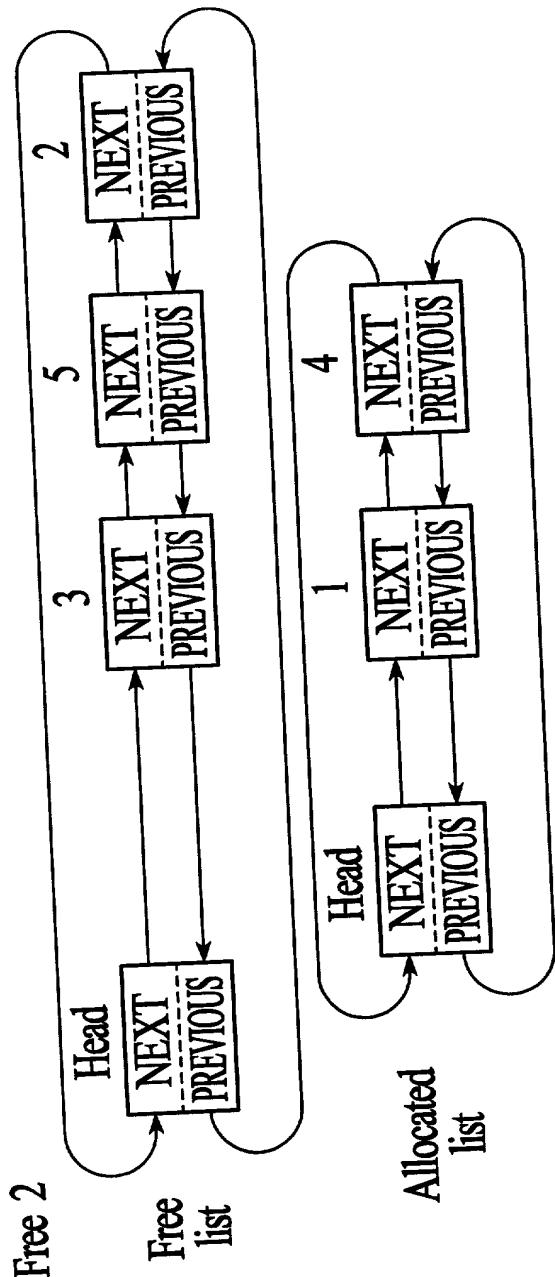
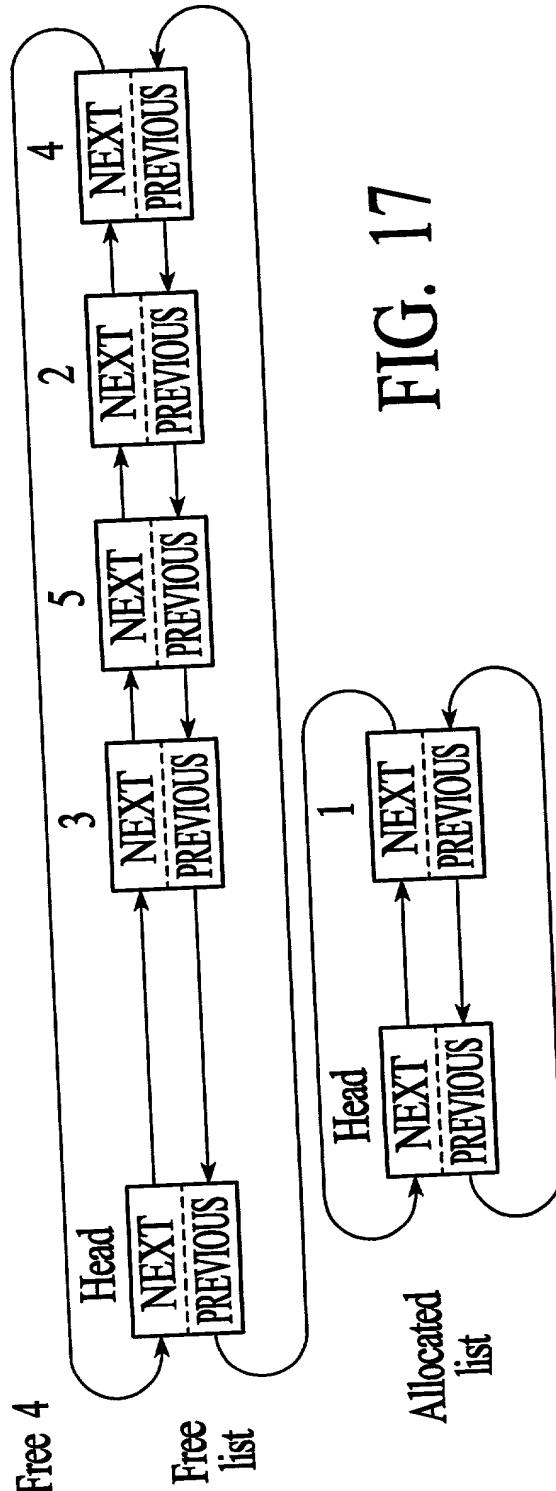


FIG. 16



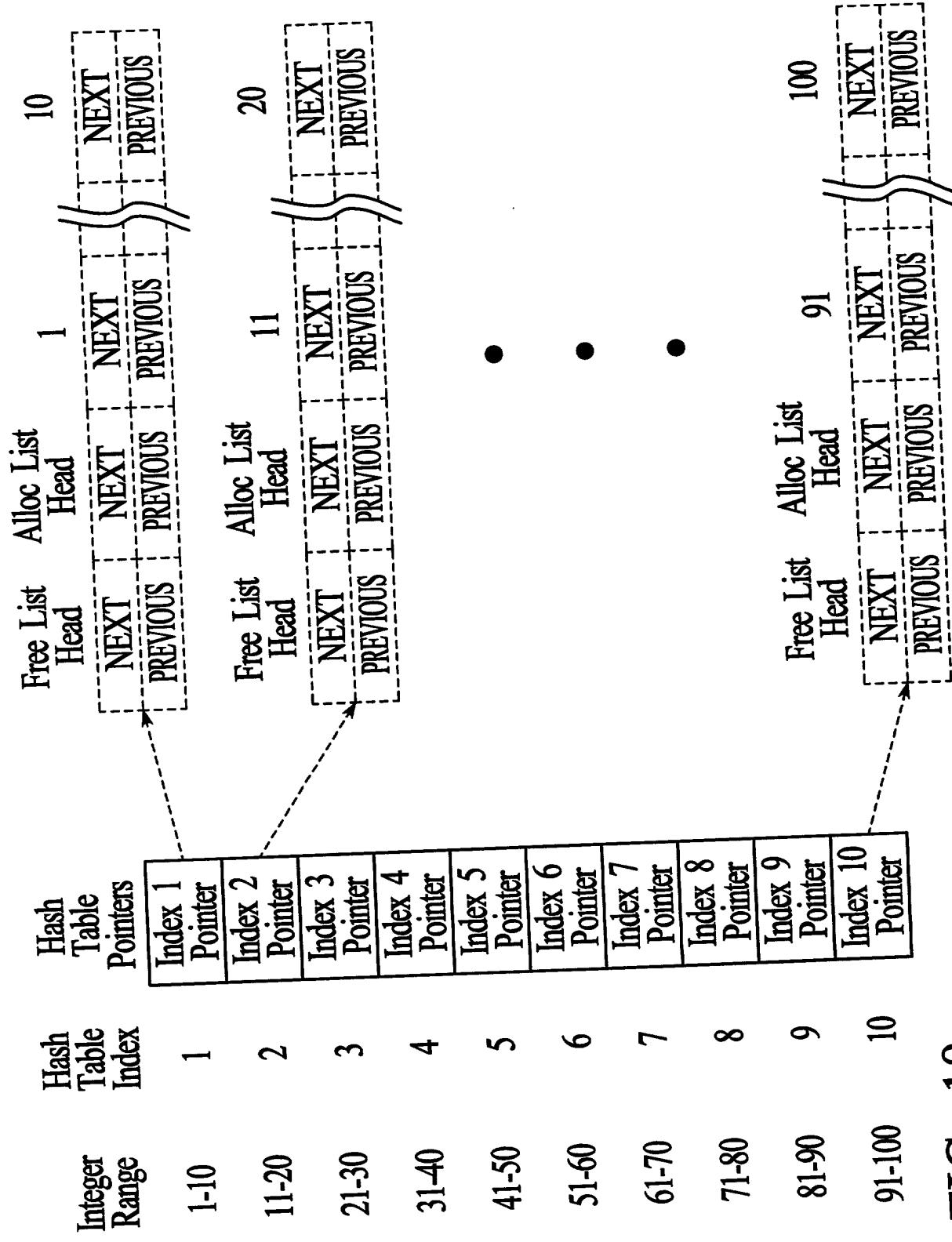


FIG. 18

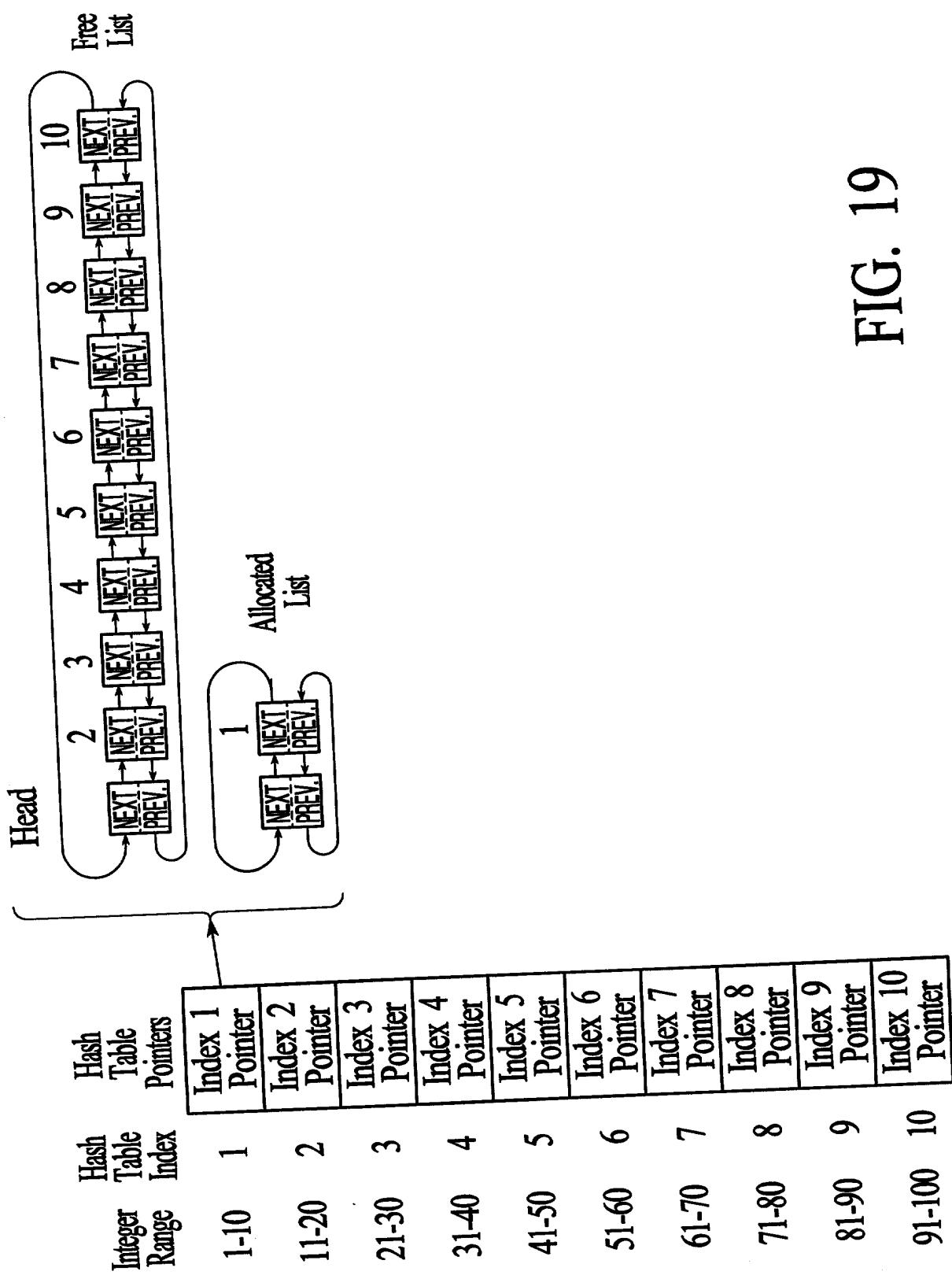


FIG. 19

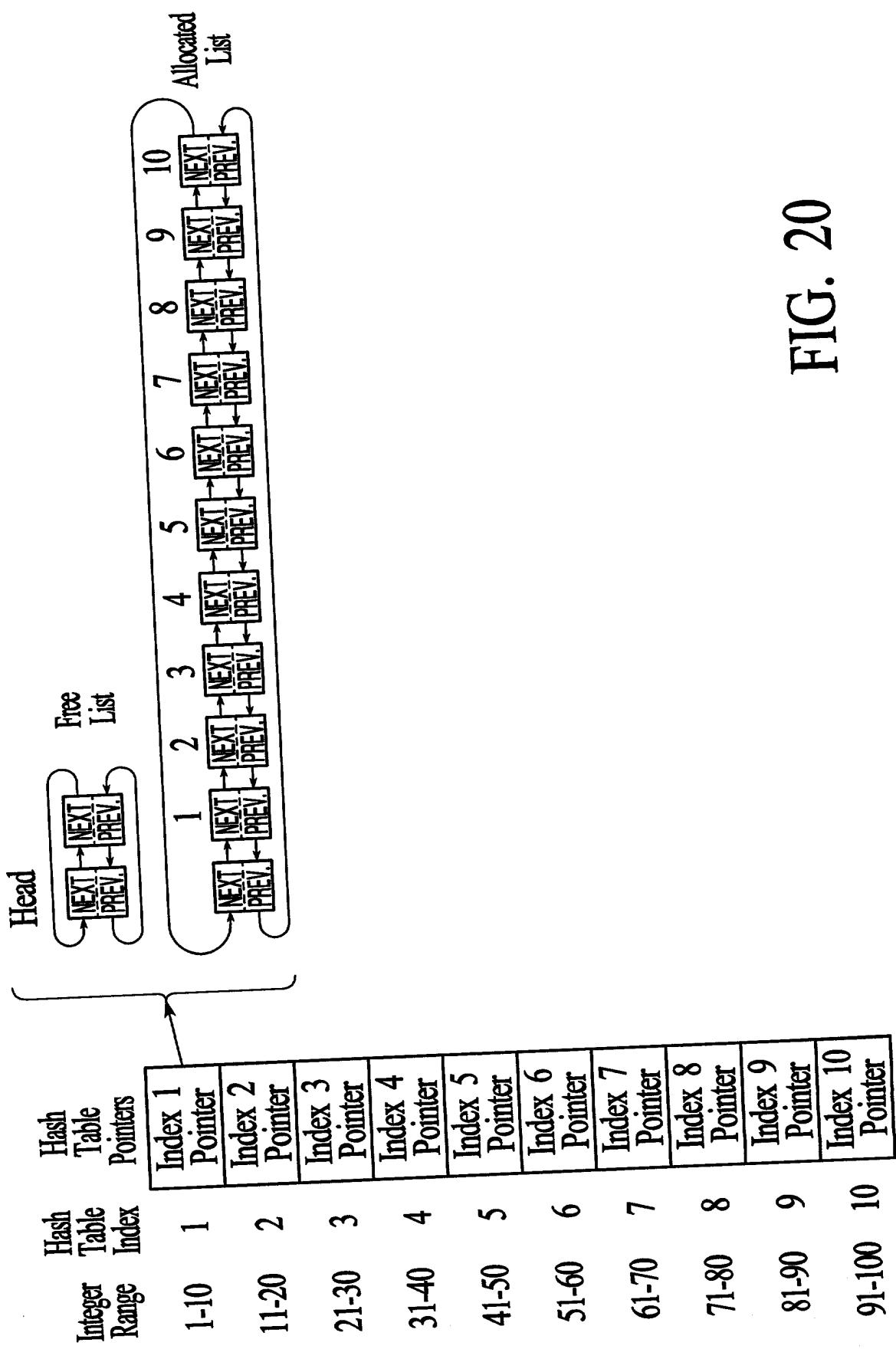


FIG. 20

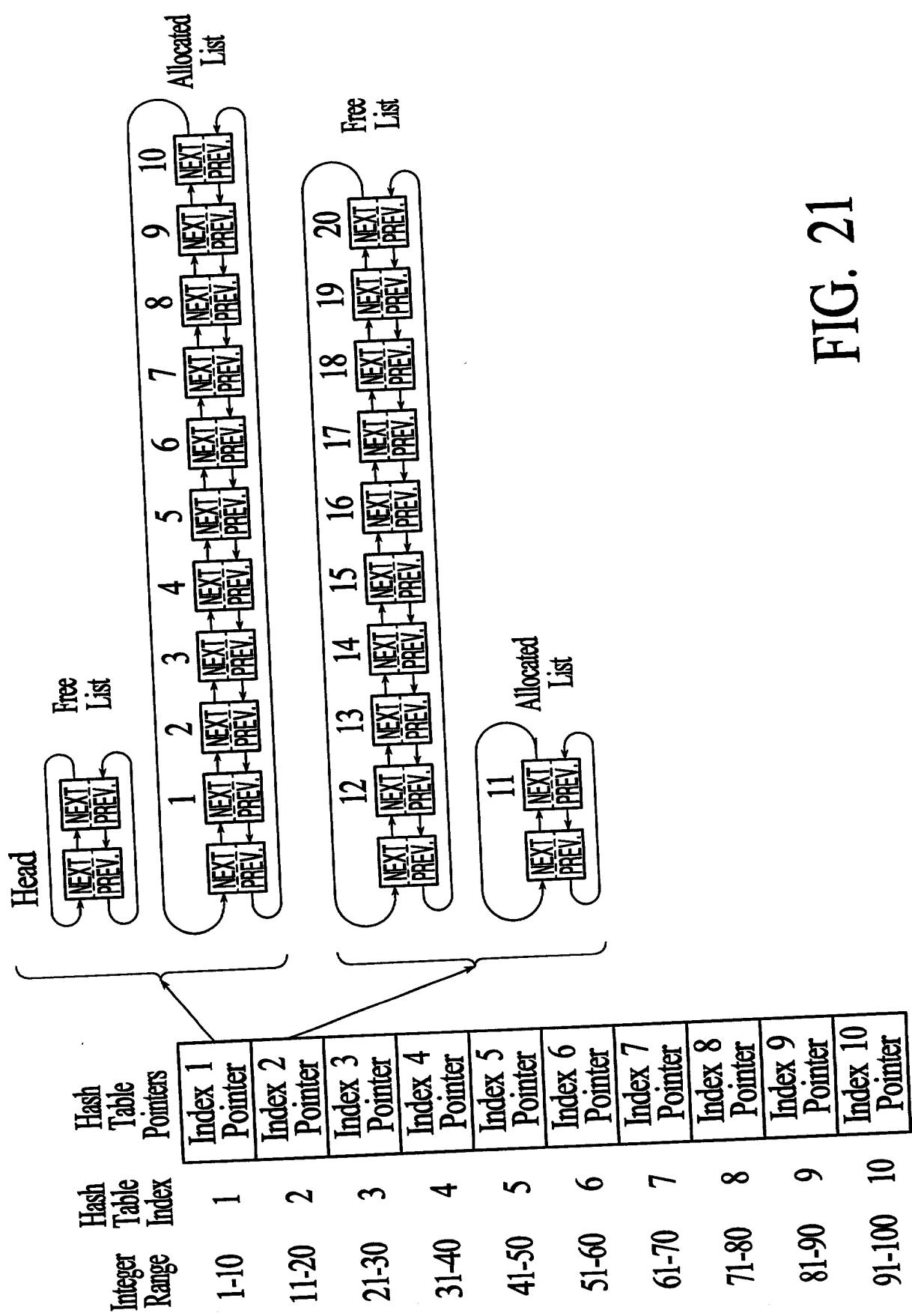


FIG. 21

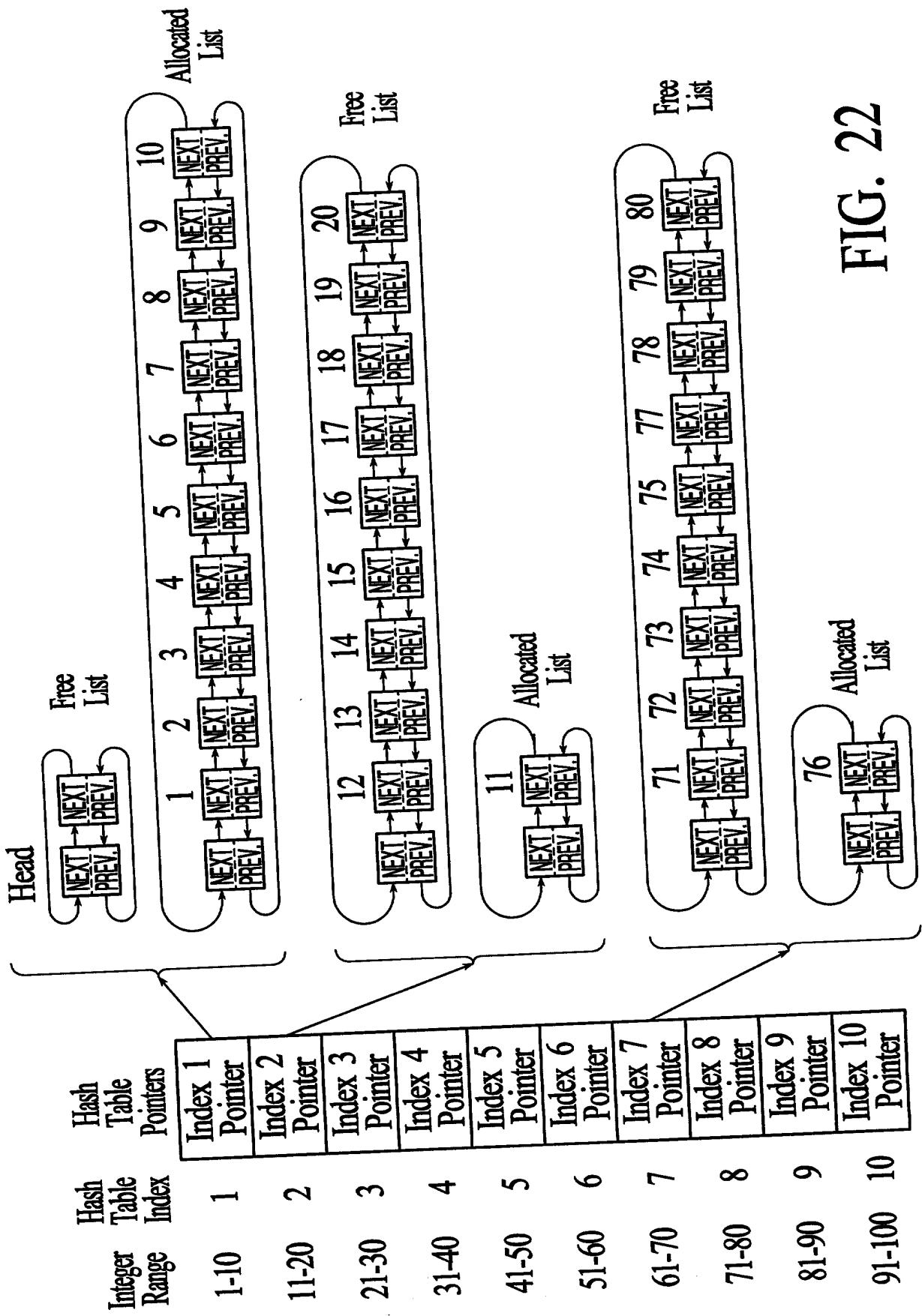


FIG. 22

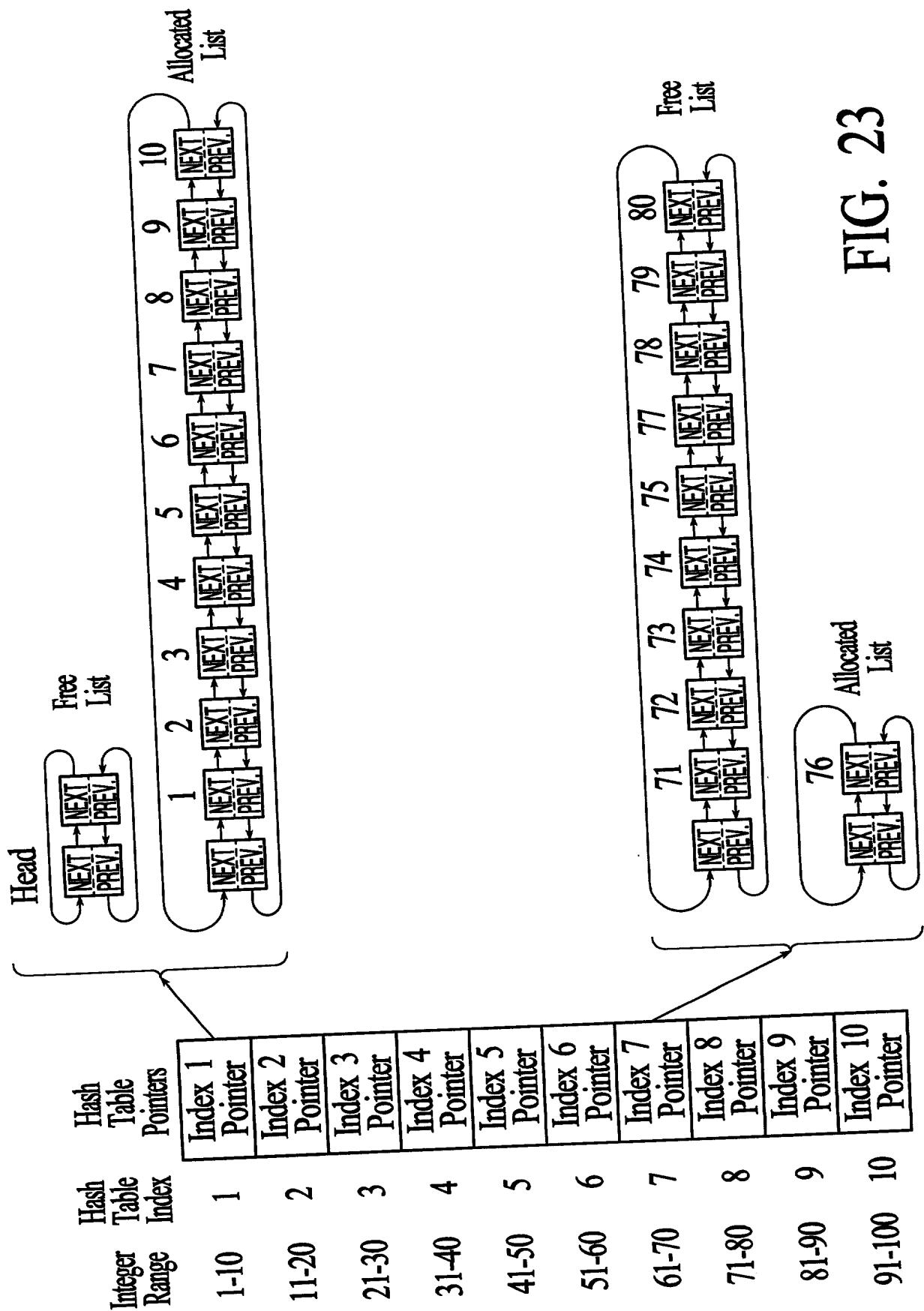


FIG. 23

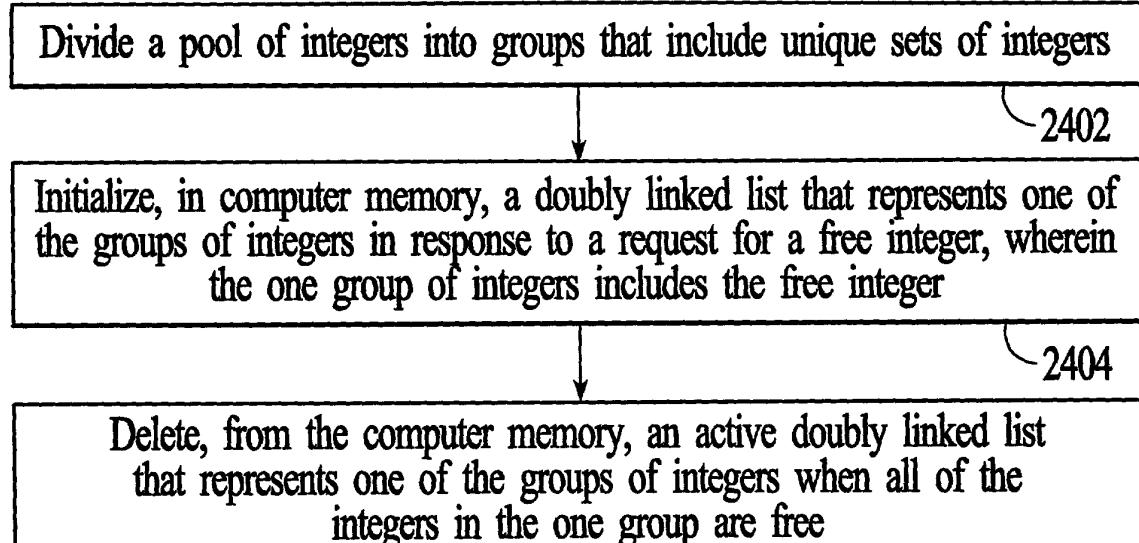


FIG. 24

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

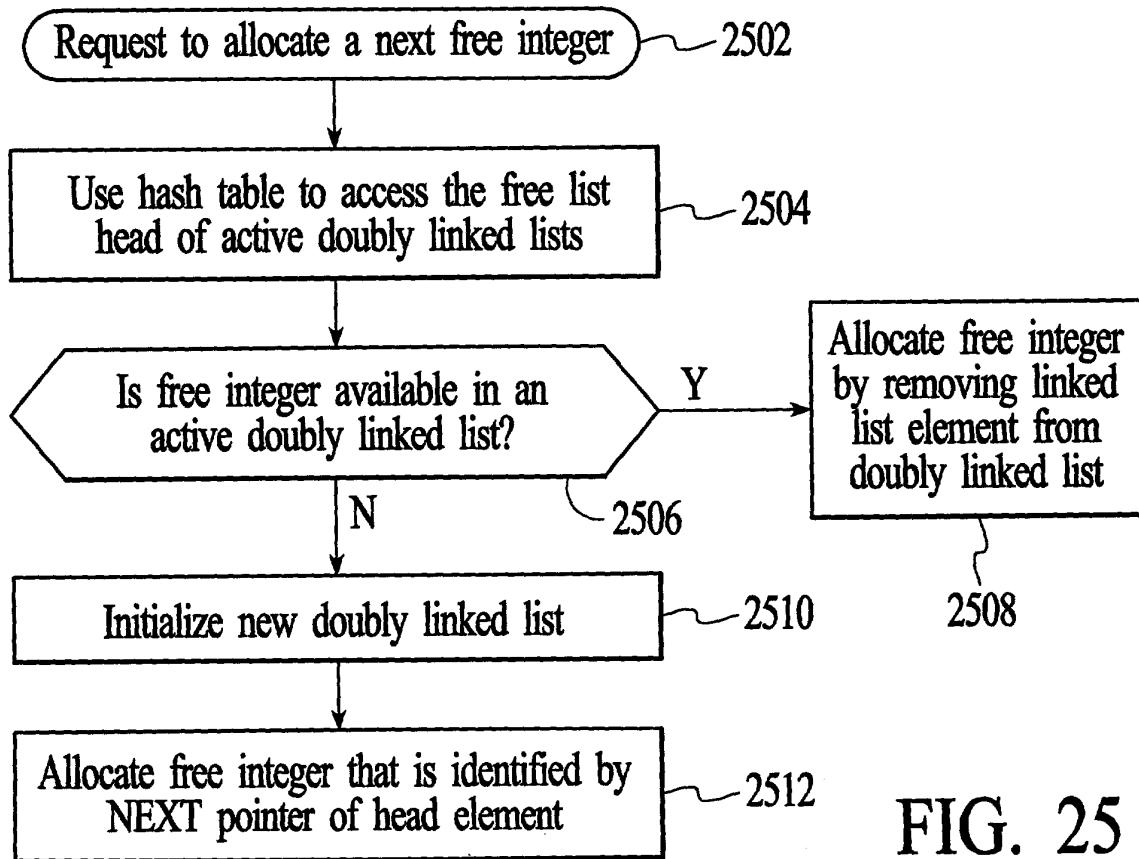


FIG. 25

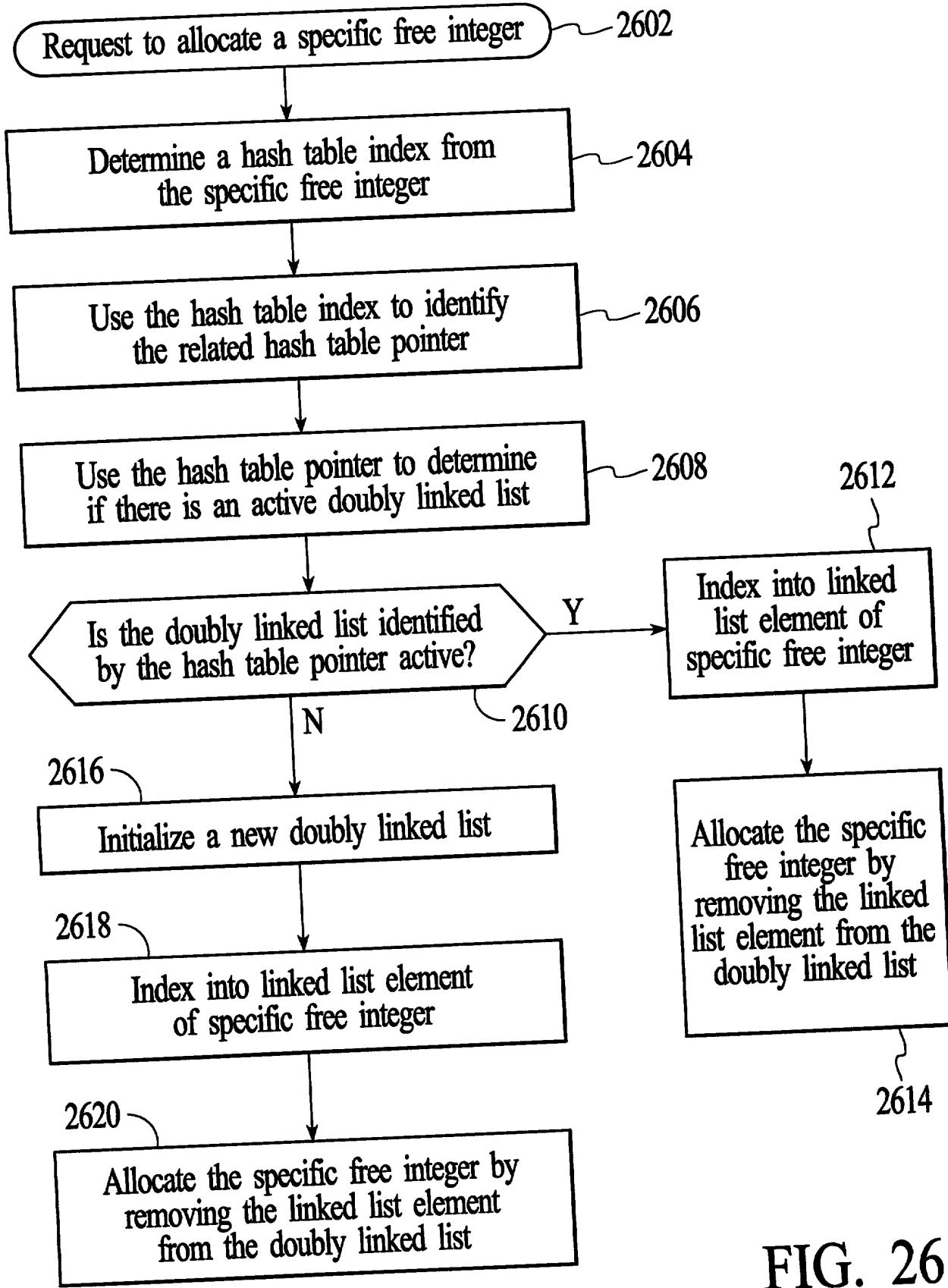


FIG. 26

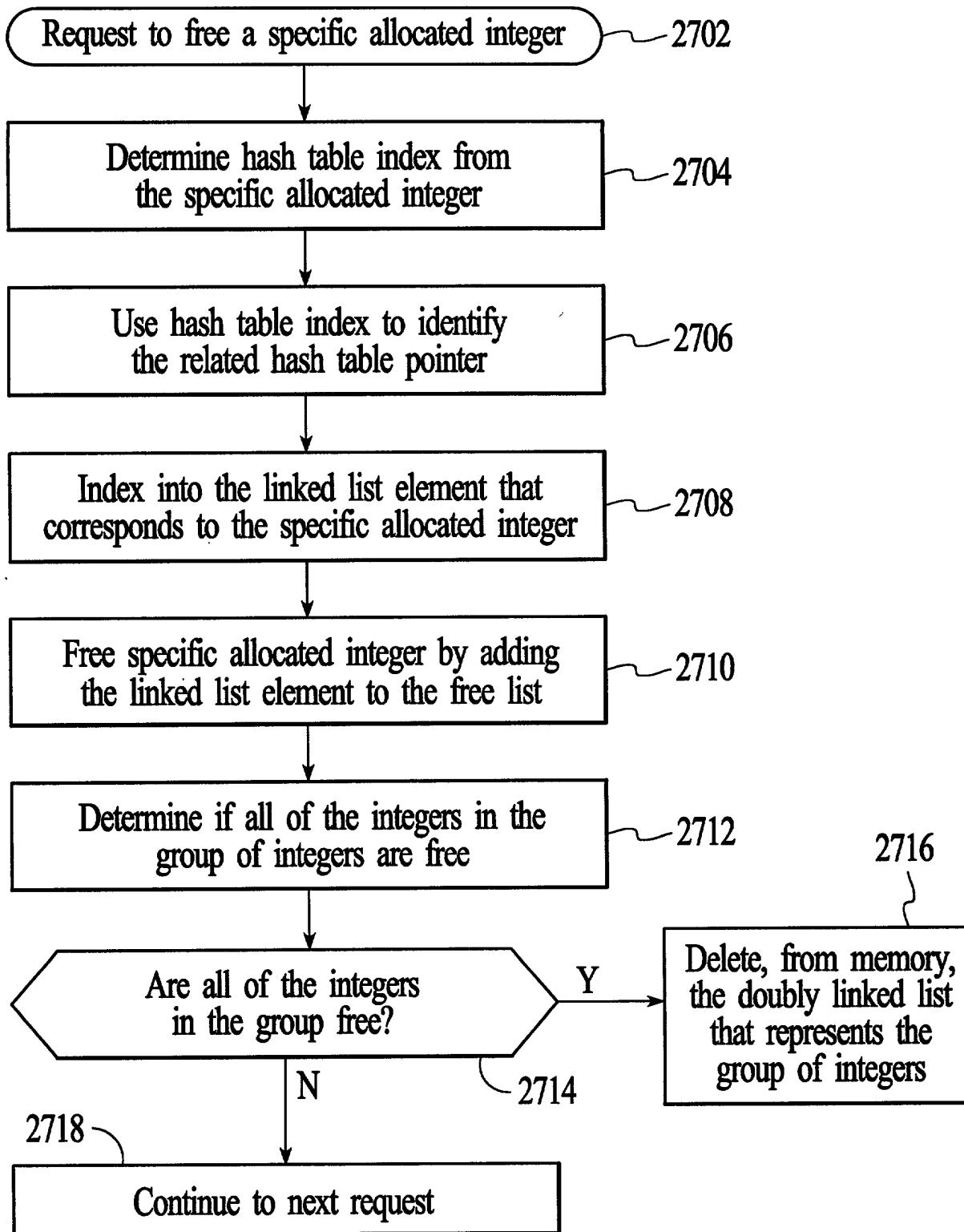


FIG. 27

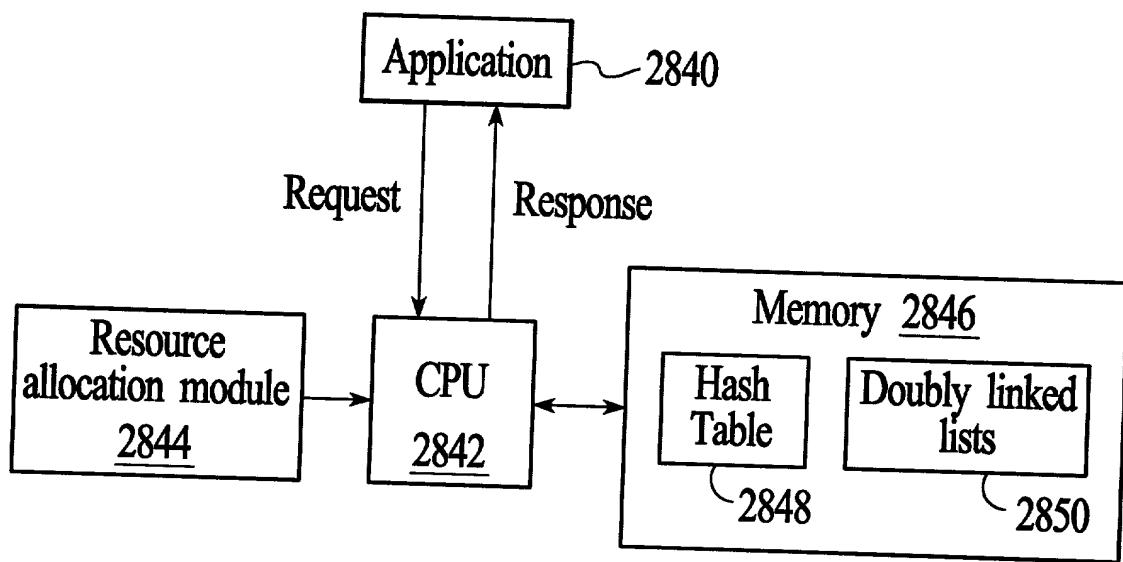


FIG. 28